

## CLAIMS:

1. For use in an SNR scalable video encoder comprising, for allowing a progressive transmission of information, a base layer circuit capable of receiving an input stream of video images and generating therefrom compressed base layer video data suitable for transmission to a video decoder and at least an enhancement layer circuit capable of
  - 5 generating therefrom enhancement layer video data associated with the compressed base layer video data and suitable for transmission to the video decoder, an encoding method based on a hierarchical triangular mesh representation to which a matching pursuit error coding step is specifically adapted, said encoding method comprising the following steps :
    - a base layer encoding step, provided for receiving a couple of reference and
      - 10 current images N-1 and N and a coarse mesh and encoding by means of a matching pursuit method the error residual image  $\epsilon_1$  between the current image N and an associated motion compensated image  $Nc_1$  ;
      - a first enhancement layer encoding step, provided for receiving said current image and a reconstructed image  $N'c_1$  obtained by adding to the motion compensated image
        - 15  $Nc_1$  the motion residual image reconstructed from the coded error residual image  $\epsilon_1$ , and for generating from the difference between said current image and said reconstructed image  $Nc'_1$  a new error residual image  $\epsilon'_1$  used to refine the current level mesh "Mesh 1" towards a new mesh "Mesh 2" then taken as input for a further level, the information concerning the mesh distortion being contained in motion vectors  $MV_1$  ;
        - 20 - at least another enhancement layer encoding step including similar receiving and generating operations ;

the matching pursuit method being applied during each encoding step to the error residual image  $\epsilon_1$  in view of the transmission of the image texture information in the form of atoms.

  - 25 2. For use in an SNR scalable video decoder receiving signals coded by a video encoder implementing an encoding method based on a hierarchical triangular mesh representation to which a matching pursuit error coding step is specifically adapted - said matching pursuit method being applied in view of the transmission of the image texture information in the form of atoms - and comprising a base layer circuit capable of receiving an

5 comprising the following steps :

- 10 itself including the successive sub-steps of reconstructing the base layer image, refining said base layer image by applying corresponding motion vectors, and adding image texture information contained in the transmitted atoms.